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## PATENT APPLICATION

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

**Docket No: Q61824**

Heung-bae LEE

Appln. No.: 09/738,900

Group Art Unit: 2611

Confirmation No.: 2194

Examiner: GHEBRETGINSAE, TEMESGHEN

Filed: December 18, 2000

For: DIRECT-CONVERSION DEMODULATOR HAVING  
AUTOMATIC-GAIN-CONTROL FUNCTION

#### REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41

#### MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.41, Appellant respectfully submits this Reply Brief in response to the Examiner's Answer dated April 17, 2007. Entry of this Reply Brief is respectfully requested.

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**STATUS OF CLAIMS**

Claims 1-3 are pending in the application.

Claims 1-3 stand rejected under 35 U.S.C. §103 as being unpatentable over Applicant's admitted prior art in view of Hiroshi (JP-6244754) and are on appeal.

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**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The sole grounds of rejection to be determined on appeal is whether claims 1-3 are properly rejected under 35 U.S.C. § 103 as being unpatentable over Applicant's admitted prior art in view of Hiroshi (JP-6244754).

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**ARGUMENT**

Rejection of Claims 1-3 under 35 U.S.C. § 103 as being unpatentable over Applicant's admitted prior art in view of Hiroshi (JP-6244754).

Appellant respectfully submits that claims 1-3 are not rendered obvious, within the meaning of 35 U.S.C. § 103, by the combination of Applicant's admitted prior art and Hiroshi proposed by the Examiner, at least because the combination of references fail to teach or suggest the claimed detector in combination with the claimed AGC.

In particular, claim 1 recites "a detector for detecting a gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level". In the rejection and in the Examiner's Answer, the Examiner refers to Fig. 27(b) of Hiroshi as showing this feature, but Fig 27(b) shows a gain control circuit 4202 that outputs a signal based upon an integrated value of a difference between a reference signal and the sum of two other signals. This integrated value is applied to the amplifiers and is not analogous to the claimed "gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level" and the AGC controlling gains according to the gain control level detected by the detector. That is, because the output of element 4202 is an integrated value, it does not correspond to the output of the subtractor shown in Fig. 27(b). At least for this reason, Hiroshi does not teach or suggest the claimed detector or the claimed AGC for controlling gains according to the gain control level detected by the detector.

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In the Examiner's Answer, the Examiner responds to the above argument by stating that:

Hiroshi discloses a detector (4202(a) and 4202(b)) for detecting a gain control level corresponding to the difference obtained by comparing the level of the baseband signals of the two channels (4203) by filter with a predetermined level. (See fig. 27 (a) and (b)) and Fig. 4 (elements 115, 116 119). Hiroshi further shows that the output from the subtractor being integrated. It is well settled, however, that omission of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before (In re Nelson, 40 CCPA 708).

Omission of an Element and its function is obvious if the function of the element is not desired (Ex parte WU, 10 USPQ 2031).

Examiner's Answer, pages 7-8 (similar reasoning appears in the Office Action of December 13, 2005, page 4, numbered paragraph 5).

First, Appellant respectfully disagrees with the Examiner's conclusion that the claimed invention differs from the combination of references in that the invention omits an element of the references. Rather, the applied references do not teach all the elements of the claim. That is, the applied references fail to teach or suggest "a detector for detecting a gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level" and "an AGC for controlling gains of the baseband signal for each of the two channels output from the down mixer according to the gain control level detected by the detector."

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In more detail, claims 1 and 3 each requires that the AGC control gains according to the gain control level of the detector, and this level corresponds to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level. There is no element in the references that performs the function of the claimed AGC.

In *In re Nelson*, cited by the Examiner, the decision was based on the belief “that the omission of the two outer paper strips of the Bulis structure would [not] cause the other elements of the device to function differently from those which they normally would perform if the strips were present in that container.” This is different from the present case, however, in that omitting Hiroshi’s integrator would cause other elements of Hiroshi to perform differently. That is, if the integrator were to be removed from the circuit of Hiroshi, so that the output of the subtractor, rather than the output of the integrator, is directly applied to the downstream circuitry, then the functions of the downstream circuitry would have to be modified to accommodate this change. This is in sharp contrast to *In re Nelson*, where the strips could simply be removed without affecting the other elements of the structure.

The present case is also very different from *Ex parte Wu*. In that case, a claimed corrosion inhibitor was different from a corrosion inhibitor of a reference in that the corrosion inhibitor of the reference contained polybasic salts, whereas the claims in dispute did not. The Board found that it would have been obvious to omit the polybasic salts of the reference where the function attributed to such salt is not desired, such as in compositions for preventing corrosion in environments that do not encounter fresh water. So, *Ex parte Wu* also involved a

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case where an element was simply omitted. This is very different from the present case, which does not simply involve omitting an element of the reference, but, in the Examiner's proposed combination, would require that the functions of other elements of the references be changed to accommodate the elimination of the integrator. There is no teaching or suggestion in the references for such a modification.

Second, Appellant respectfully submits that procedural processes which allow portions of the claims to be ignored are, at best suspect and, at worst, contrary to law. The case of *In re Ochiai et al.*, 37 U.S.P.Q.2d 1127 (Fed. Cir. 1995), is illustrative. In *Ochiai* the CAFC soundly rejected *per se* rules of patentability. Thus, whether or not a claim recites patentable subject matter can only be determined on a case by case determination after considering each and every limitation recited in the claim. Since the CAFC has made it clear time and time again that it is **the claim as a whole which must be considered during examination**, statements regarding parts of the claim which are or are not given "patentable weight" are not well taken.

In the present case, the Examiner is relying on a principle that omission of an element is obvious if the remaining elements perform the same functions as before or if the function of the element is not desired. As argued above this is not the case here, where the other elements of the reference would perform the same functions as before if the integrator were to be removed. Furthermore, even if it were to be assumed for the sake of argument that the remaining elements would perform the same functions as before if the integrator were to be omitted, Appellant respectfully submits this is not enough to support a claim rejection. Rather, there must be some

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teaching or suggestion in the art for omitting an element, and for modifying the remaining structure to accommodate the fact that the element has been omitted.

In the Advisory Action, in addition to referring to elements of Figs. 27(a) and (b) which were discussed above, the Examiner refers to elements 115, 116 and 119 of Hiroshi (Fig. 1) as disclosing a detector for detecting a gain control level corresponding to the difference obtained by comparing (the output from elements 124 and 125; Fig. 1) with a predetermined level (116; Fig. 1), and controlling gains of the baseband signals. Appellant notes, however, that the Fig. 1 configuration shown in Hiroshi has amplifiers 112 and 113 connected between the output of the filters 110 and 111. Thus, the detector 115 cannot possibly detect a gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level. In Fig. 1 of Hiroshi, the signals output by the filters have been amplified by amplifiers 113 and 114, so the levels of the baseband signals output by the filters are never detected by the detector 115.

In view of the above, Appellant respectfully submits that Appellant's admitted prior art and Hiroshi, taken either alone or in combination, fail to teach or suggest "a detector for detecting a gain control level corresponding to the difference obtained by comparing the levels of the baseband signals of the two channels output by the filter with a predetermined level" and "an AGC for controlling gains of the baseband signal for each of the two channels output from the down mixer according to the gain control level detected by the detector," and at least for this reason, the rejection of claims 1-3 under 35 U.S.C. § 103 as being unpatentable over Appellant's admitted prior art in view of Hiroshi should not be maintained.



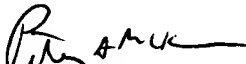
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**CONCLUSION**

For the above reasons as well as the reasons set forth in Appeal Brief, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal. An early and favorable decision on the merits of this Appeal is respectfully requested.

Respectfully submitted,

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